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Claims:

Apparatus for transmitting VBR (Variable-Bit Rate) and CBR (Constant Bit-Rate)
 Packets over a telecommunications network, comprising:

means for separating VBR data from CBR data;

means for combining a limited amount of CBR data with an additional amount of VBR data to form a frame of data; and

means for transmitting said frame of data to a telecommunications network.

- 2. The apparatus of Claim 1, wherein said frame is an xDSL Frame.
- 3. The apparatus of Claim 1, further comprising means for dynamically altering the limit on the amount of CBR data that is combined into each frame.
- 4. The apparatus of Claim 3, further comprising means for dynamically altering the limit on the amount of CBR data that is combined into each frame.
- 5. The apparatus of Claim 4, wherein said means for dynamically adjusting comprises:

 means for adjusting said limit as new traffic is generated, or old
 traffic is terminated.

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- 6. The apparatus of Claim 4, wherein said limit on the amount of CBR data that is combined into each frame is adjusted in response to the amount of CBR data waiting to be transmitted.
- 7. The apparatus of Claim 4, wherein said limit on the amount of CBR data combined into each frame is selected to guarantee that all CBR packets are transmitted within required parameters for said CBR packets.
- 8. The apparatus of Claim 1, wherein said telecommunications network is an Internet Protocol (IP) Network.
- 9. The apparatus of Claim 1, further comprising means for identifying a priority level for each packet;

wherein said telecommunications network routes each marked packet according to its priority marking.